

8-3-87



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

006322

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

AUG 3 1987

SUBJECT: EPA Registration No. 476-859
VaPam Soil Fumigant Solution

FROM: Mary L. Waller
Technical Support Section
Fungicide-Herbicide Branch
Registration Division (TS-767C)

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8/18/87
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TO: Lois A. Rossi, PM 21
Fungicide-Herbicide Branch
Registration Division (TS-767C)

APPLICANT: Stauffer Chemical Company
1200 South 47th Street
Richmond, CA 94804

ACTIVE INGREDIENT:
Sodium methyldithiocarbamate 32.7%
INERT INGREDIENTS: 67.3%

BACKGROUND:

The registrant has submitted a dermal sensitization study as requested by the 9/2/86 TSS data review. The study was conducted by Richmond Toxicology Laboratory. The MRID number is 401966-01. The method of support is owner submission. The registrant has also submitted information in a January 30, 1987 letter requesting that the Statement of Practical Treatment for oral exposure be revised.

RECOMMENDATION:

FHB/TSS finds the dermal sensitization study acceptable and classifies the product as a sensitizer.

FHB/TSS finds the registrants explanation for the labeling change acceptable based on the primary skin irritation study

which indicates that the product is a severe irritant and the company's statement that poison control centers do not recommend emesis.

LABELING:

1. Add the following sentence to the precautionary statement:

May cause allergic skin reaction.

2. Revise Statement of Practical Treatment for oral exposure as follows:

IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available drink large quantities of water. Avoid alcohol. Do not give anything by mouth to an unconscious or convulsing person.

3. Add the following:

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

REVIEW:

Dermal Sensitization Study: Richmond Toxicology Laboratory; study number T-12378; 4-24-87.

PROCEDURE:

Three groups of ten guinea pigs received ten 6 hour induction treatments applied to the previously shaven right flank of each animal three times a week for three weeks as follows: the test group received 1% test material in water; the negative control group received water and the positive control group received 0.1% dinitro-chlorobenzene (DNCB) in 70% ethanolic water. Induction treatments were applied topically under occlusive wrap for 6 hours of exposure.

Beginning two weeks after the last induction treatment, the test group and negative control group were challenged three times at one week intervals and the positive control

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group was challenged twice. For the first challenge, animals received the following treatment: the test group and the negative control group were treated with 1% test material at the first site and water at a second site. For the second challenge, animals received the following treatments: the test group and the negative control group were treated with 1% test material at the first site, 0.1% test material at a second site and water at a third site; and the positive control group was treated with 0.1% DNCB at the first site and acetone at a second site. For the third challenge, both the test group and the negative control group were treated with 1% test material at the first site, 0.1% methyl isothiocyanate at a second site and acetone at a third site. Skin irritation was scored at 24, 48, and 72 hours after each induction and challenge treatment.

RESULTS:

During the induction phase, 2/10 animals exhibited very slight erythema beginning at the third induction treatment. Irritation increased in severity and in the number of animals until 7/10 animals exhibited slight erythema with eschar and skin flaking by the last induction treatment. The negative control group did not exhibit any irritation during the induction phase. After the second induction treatment, the positive control group exhibited irritation which increased in severity and in number of animals affected until 9/10 animals exhibited slight erythema and 3/10 animals exhibited very slight to slight edema after the last induction treatment.

At first challenge, test group exhibited the following irritation, 3/10 animals exhibited slight erythema, 3/10 animals exhibited very slight erythema and 2/10 animals exhibited very slight edema in response to the 1% test material application. The negative control group exhibited no irritation. The positive control group exhibited the following irritation: 9/10 animals exhibited slight erythema, 1/10 animals exhibited very slight erythema, 7/10 animals exhibited slight edema and 2/10 animals exhibited very slight edema in response to the 0.1% DNCB; and no irritation was observed in response to the acetone.

At second challenge, the test group exhibited the following irritation: 7/10 animals exhibited slight erythema, 1/10 animals exhibited very slight erythema and 3/10 animals exhibited slight edema in response to the 1% test material; and 2/10 animals exhibited slight erythema and 1/10 animals exhibited very slight erythema in response to the 0.1% test material. The negative control group exhibited the following irritation: 7/10 animals exhibited slight erythema, and 2/10 animals exhibited very slight erythema in response to the 1%

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test material; 3/10 animals exhibited slight erythema and 2/10 animals exhibited very slight erythema in response to the 0.1% test material. The positive control group exhibited the following irritation: 1/10 animals exhibited moderate erythema, 9/10 animals exhibited slight erythema, 1/10 animals exhibited moderate edema, and 2/10 animals exhibited slight edema in response to the 0.1% DNCB; and no irritation was observed in response to the acetone.

At third challenge, the test group exhibited the following irritation: 9/10 animals exhibited slight erythema, 1/10 animals exhibited very slight erythema, 5/10 animals exhibited slight edema and 1/10 animals exhibited very slight edema in response to the 1% test material; and 8/10 animals exhibited slight erythema, 1/10 animals exhibited very slight erythema, 2/10 animals exhibited slight edema, and 1/10 animals exhibited very slight edema in response to the 0.1% methyl isothiocyanate. The negative control group exhibited the following irritation: 9/10 animals exhibited slight erythema, 1/10 animals exhibited very slight erythema, 1/10 animals exhibited slight edema and 3/10 animals exhibited very slight edema in response to the 1% test material; and 4/10 animals exhibited slight erythema, 3/10 animals exhibited very slight erythema, and 3/10 animals exhibited slight edema in response to the 0.1% test material.

STUDY CLASSIFICATION: Core Guideline Data

TOXICITY CATEGORY: SENSITIZER

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(Stauffer Shield)
VAPAM®

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Soil Fumigant Solution For
All Crops

ACTIVE INGREDIENT:
Sodium methyldithiocarbamate (anhydrous) 32.7%

INERT INGREDIENTS: 67.3%

* Contains 3.18 lbs. active ingredient per gallon 100.0%

Keep Out of Reach of Children

WARNING

Statement of Practical Treatment

FIRST AID

Immediately start the procedures given below and CONTACT A POISON CENTER, A PHYSICIAN OR THE NEAREST HOSPITAL. Describe the type and extent of exposure, the victim's symptoms, and follow the advice given.

For skin contact, flush affected areas with large amounts of running water for 15 minutes and get medical attention. Remove and clean contaminated clothing and shoes.

For eye contact, immediately flush eyes with large amounts of running water for 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Get medical attention immediately.

If inhaled, remove to fresh air. If breathing is difficult, oxygen may be given with a physician's advice. If not breathing, clear victim's airway, start mouth-to-mouth artificial respiration, and get medical attention.

If swallowed, immediately give several glasses of water but do not induce vomiting. If vomiting occurs, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

FOR ADDITIONAL MEDICAL OR TOXICOLOGICAL INFORMATION, CALL COLLECT, DAY OR NIGHT, STAUFFER EMERGENCY MEDICAL ASSISTANCE, (203) 225-6602.

See Side Panel for Additional Precautionary Statements

EPA Reg. No. 476-859 ___ GAL. NET ___ L RS-860711

This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified: Country: U.S.A.

Made in U.S.A. by
STAUFFER CHEMICAL COMPANY
WESTPORT, CT 06881-0850

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PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals

WARNING

Harmful if inhaled or swallowed. Irritating to eyes, nose, throat and skin. Avoid breathing vapor or spray mist. Do not get in eyes, on skin, or clothing. Causes skin irritation. May be fatal if absorbed through skin. In case of contact, immediately remove contaminated clothing. Wash and dry clothing before reuse. When applying in enclosed areas, wear a mask or respirator of a type passed by the U.S. Bureau of Mines for Vapam protection. Do not store near food or feed. Keep children and pets out of treated areas.

Environmental Hazards

This product is toxic to fish. Do not apply directly to water. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of waste. Apply this product only as specified on the label.

In case of Emergency - Immediately call (24 hours) (800) 424-9300 Pesticide Safety Team Network or (203) 226-6602 Stauffer Chemical Company.

STORAGE AND DISPOSAL

Prohibitions: Do not contaminate water, food or feed by storage or disposal.

Storage: Do Not Store Below 0°F. Product crystallizes at lower temperatures. Warm or store at higher temperatures and mix to redissolve crystals and assure uniformity before use.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

PRODUCT INFORMATION

VAPAM is a water soluble liquid. When applied to properly prepared soil, the liquid is converted into a gaseous fumigant. After sufficient interval of time, the gas dissipates leaving the soil ready for planting. VAPAM is recommended for the control of the following soilborne pests that attack ornamental, food and fiber crops: Weeds and germinating weed seeds [annual bluegrass, bermudagrass, chickweed, dandelion, ragweed, henbit, lambsquarters, Amaranthus sp. (pigweed, careless weed) watergrass, johnsongrass, nutgrass, wild morningglory and purslane] nematodes, symphylans, (garden centipede); and soil-borne diseases (Rhizoctonia, Phythium, Phytophthora, Verticillium, Sclerotinia, oak root fungus and club root of crucifers).

USE PRECAUTIONS

Keep children and pets out of treated area. Keep off desirable lawns and plants. Do not apply within 3 feet of the drop line of desirable plants, shrubs or trees. Do not use in confined areas without adequate ventilation OR where fumes may enter nearby houses containing growing plants. Do not use in green houses where desirable plants are present. Keep container tightly closed when not in use. Do not store near feed or food.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Before applying VAPAM always cultivate thoroughly area to be treated, breaking up clods and loosening soil deeply and thoroughly. A week before treatment, moisten soil after cultivation to the desired depth; sprinkle or flood irrigate. This step is essential for all methods of use. Immediately before application, cultivate lightly if the soil has crusted.

To prevent loss from evaporation, use only at times when air temperatures is moderate and there is little wind movement. Soil temperature must be in the range of 60°-90°F. at a 3 inch depth. For other conditions, see section, "Cultivation & Planting After Application." Do not apply to the soil surface, as in the sprinkler method, when air temperature is over 90°F. or when low humidity or high winds would cause loss of VAPAM before it can be drenched into the soil with additional water. If fumes become unpleasant during treatment, apply more water to seal the fumes into the soil where they should be confined to achieve maximum fumigant benefit.

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